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09/088,707	06/02/98	BERTELO	C ATOCM67D1

IM22/1023
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EXAMINER

MULLIS, J

ART UNIT	PAPER NUMBER
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1711

DATE MAILED:

12
10/23/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/088,707

Applicant(s)
Bertelo et al.

Examiner
Jeffrey Mullis

Group Art Unit
1711



☒ Responsive to communication(s) filed on 3-20, 6-26, 7-27 and 8-23-00.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-34 and 36-70 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-34 and 36-70 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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All remaining rejections and/or objections follow.

Claims 1-34, 36-48, 53-54, 69 and 70 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

Claim 28 and claim 1 are unclear as to whether or not a grafting agent need be present in the core since these claims recite that the covering "2" is an acrylate or grafting agent while the claim also says that the grafting agent is present at a level of from 0.05 to 2.5%. This is contradictory.

The term "type" renders those claims in which this term appears unclear in that it cannot objectively be determined when something is of the type of another.

Claim 69 is unclear in that this claim recites "a shell grafted onto the said core composed of a polymer of an alkyl methacrylate" while Part "a" of claim 69 recites that the core may be "polyorganosiloxane". It is therefore unclear whether the shell recited in Part B is meant to be grafted to the polyorganosiloxane core. If not, it is not clear what the polyorganosiloxane core is grafted with.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 28-34 and 36-40 are rejected under 35 U.S.C. § 102(b) as being anticipated by Aoyama et al. (USP 5,360,865).

See the previous Office action at the paragraph bridging pages 5 and 6.

Aoyama et al. do not disclose a covering of grafting agent as recited in Part "2" of claim 28. However as set out above, it is unclear whether a covering of grafting agent is required by claim 28. If the grafting agent "having only allyl functional groups, all having the same reactivity" is required by claim 28, then this claim is not anticipated by Aoyama et al. or rendered obvious by Aoyama et al.

Claims 1-34 and 36-70 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown et al. (USP 4,788,251), Wu et

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al. (USP 5,346,954), Dunkle (USP 4,659,767), optionally in view of Aoyama et al., cited above.

All patents disclose a thermoplastic composition containing an acrylate ester core-shell impact modifier in which the core contains a diallyl maleate. See column 7 lines 28-30 and the paragraph bridging columns 7 and 8 of '251; column 4 lines 64-66 and the Examples of '954 and column 4 lines 20-35 of '767 in this regard.

Although all of the references disclose that alkyl acrylates having more than 4 carbon atoms in the alcohol moiety may be used, no examples exist in which such higher alkyl acrylates are used in the core and some of the references do not disclose the use of diallyl maleate in any of the Examples although all of the references disclose that diallyl maleate may be used as a graft linker.

Aoyama et al. disclose that impact strength in a core shell modified composition may be increased by using an alkyl acrylate containing 6-10 carbon atoms in the alcohol moiety rather than a lower number of carbon atoms. Note column 1 lines 18-30 and column 2 lines 20-27 in this regard.

It would have been obvious to a practitioner having ordinary skill in the art at the time of the invention to use alkyl acrylates having a number of carbon atoms higher than 4 in the alcohol moiety since the references specifically disclose that

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such alkyl acrylates may be used and in the expectation of adequate results; further motivation is provided by the secondary reference Aoyama et al. which suggests that impact strength would be increased by such a modification and in the expectation of increasing impact strength of the primary references absent any showing of surprising or unexpected results.

It would have been obvious to a practitioner having ordinary skill in the art at the time of the invention to use diallyl maleate as graft linking agent in the Examples of the primary references since the primary references specifically disclose that diallyl maleate may be used and in the expectation of adequate results absent any showing of surprising or unexpected results.

Applicants' arguments filed 3-20-00; 6-26-00; 7-27-00 and 8-23-00 have been fully considered but they are not deemed to be persuasive.

Applicants' remarks are moot with regard to any rejections not appearing above since all other rejections have been withdrawn.

With regard to claim 28, upon further consideration, it is the position of the Examiner that it is still unclear as to whether claim 28 requires a grafting agent "having only allyl functional groups, all having the same reactivity" in that Part "2" recites that the grafting agent is an alternative to the

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acrylate shell. Therefore the rejection over Aoyama et al. has been maintained. Applicants' remarks regarding the rejection under 35 U.S.C. §102 over Aoyama et al. are moot since this rejection has been withdrawn.

The Examiner regrets the above new grounds of rejection.

This Office action is not being made FINAL.

Any inquiry concerning this communication should be directed to Jeffrey Mullis at telephone number (703) 308-2820.

J. Mullis:cdc

October 21, 2000

JEFFREY C. MULLIS
PRIMARY EXAMINER
GROUP 1200 1711

A handwritten signature in black ink, appearing to be 'JCM', written over the printed name and title.